REFERENCE

1. DeMaria AN. The morphing of cardiovascular specialists (editorial). J Am Coll Cardiol 2005;45:960–1.

The Morphing of Cardiovascular Specialists

We read with interest the insightful and balanced perspective put forth by Dr. DeMaria concerning the collective futures of specialists involved in the care of patients with cardiovascular disease (1). Although we agree that as new technologies are introduced and become incorporated into the care of patients there will be a continued blurring of traditional boundaries between specialists, we also believe that the root problem stems from the limitation of traditional training paradigms to adapt to a rapidly evolving specialty and that the ultimate solution to limiting "turf battles" will be to devise new cross-specialty training pathways.

Much attention is being focused on how practicing specialists can "retrain" and obtain procedural and cognitive skills outside their traditional scope of practice (i.e., vascular surgeons learning catheterization techniques and cardiologists becoming more involved in the treatment of peripheral vascular disease). Traditional practice patterns are rapidly becoming nontraditional. However, little is being done to address how we train and produce the cardiovascular specialist of the future. Existing organ-based training paradigms most likely will not be able to accommodate the current and future needs of cardiovascular physicians. The next wave of disruptive innovations in cardiovascular medicine, beyond endovascular procedures and advanced imaging, will likely involve molecular therapeutics such as tissue engineering, nanotechnology, biogenomics, and pharmacogenetics. Therefore, we believe that the cardiovascular specialist of the future will 1) possess intensive surgical training in cardiovascular disease, 2) be interventionally trained in catheter-based skills, 3) have expertise in advanced radiology imaging, and also 4) be a tissue engineer.

It is unrealistic to expect even the most motivated specialist physician to spend 6 to 10 years training in a traditional residency pathway and then, upon graduation, immediately spend another year (at a minimum) "retraining" to acquire another set of cross-specialty skills necessary to become a comprehensive cardiovascular specialist. No specialty can single-handedly "morph" its existing training curriculum to encompass the diverse requirements of a multifunctional cardiovascular specialist. The American Board of Internal Medicine, American Board of Surgery, American Board of Radiology, and American Board of Thoracic Surgery should cooperatively create a joint task force empowered with the responsibility to develop an innovative hybrid training pathway that would potentially involve a six-year training program after medical school, with rotations in internal medicine, cardiology, radiology, general surgery, vascular surgery, and cardiothoracic surgery. After completing this newly proposed Cardiovascular Residency, residents would then be able to obtain joint certification, which would be recognized by each of the individual specialty boards.

It is important that training issues relating to new technologies and procedural interventions in cardiovascular surgery and medicine are addressed sooner rather than later in order to train the next generation of physician leaders adequately. The model of the future with regards to achieving success in medicine is cooperation and collaboration, not isolation and confrontation. Just as our patients deserve the best and most innovative technologies for the treatment of their cardiovascular medical problems, our medical students and residents should have access to new and innovative training pathways—the future of our "specialty" depends on it.

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REPLY

The major point of my Editor's Page (1) was that advances in knowledge and technology would bring with them the need for new skills, often those possessed by other specialists within the medical community. I speculated that this would lead to blurring of the borders between specialties, consolidated training programs, and new categories of subspecialists. Ultimately, those who will lead these fields will be those with the combined skill set, regardless of which discipline of medicine they call home.

Dr. Shanmugam agrees that cardiac surgery will participate in this "morphing" procedure and points to the potential of percutaneous valve replacement as a good example of the forces that could stimulate change. In fact, it could be argued that cardiac surgery faces the greatest potential for "morphing" in the future. I agree entirely with his call for caution in undertaking new procedures in clinical settings where lack of success could have dramatic consequences. I believe that the call for all such investigations to involve both cardiologists and surgeons is well heeded. Dr. Boxt points to the potential turf battles inherent in the morphing process, and he is apparently ahead of the curve in having already acquired the dual skill set optimal for cardiac imaging. Drs. Wheatley and Diethrich call for joint training programs, a concept with which we are in agreement. However, I must admit that their proposal of a six-year training program, which would render one certifiable in cardiology, surgery, and radiology, sounds a bit daunting. My own opinion is that the morphing of specialties will likely be in specific areas such as imaging or catheter intervention. However, I applaud their innovative thinking and proactive approach to the challenges we face in the future.

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